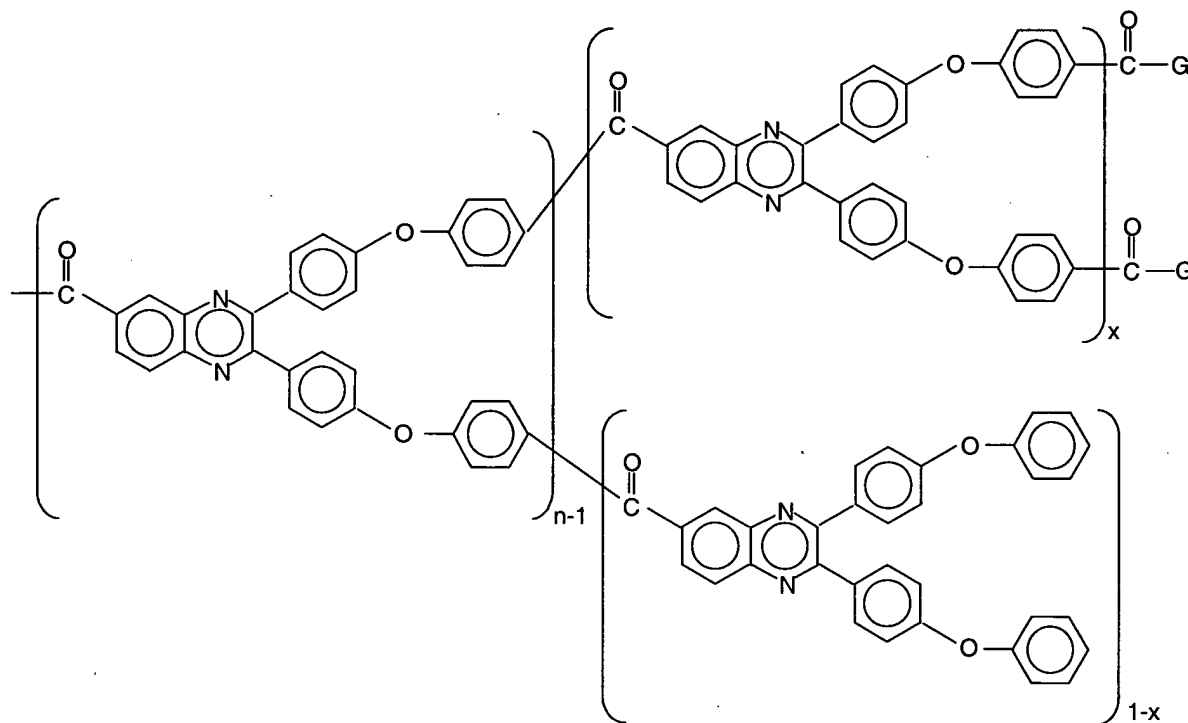
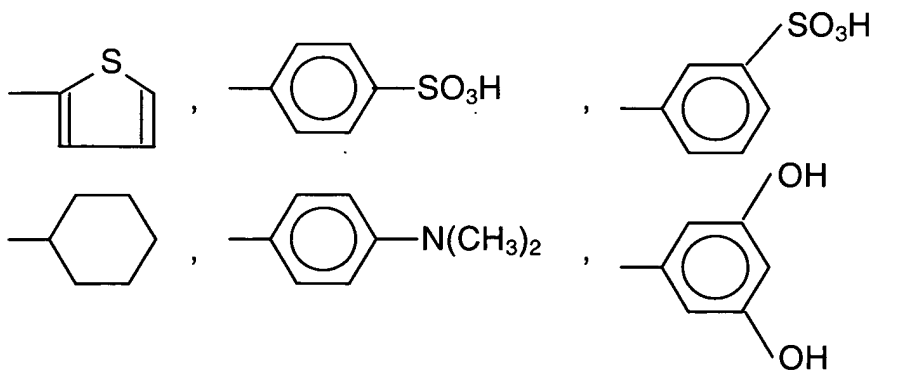


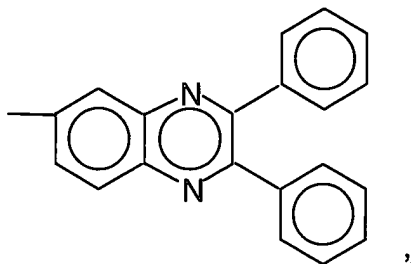
We claim:

1. An end-capped quinoxaline-containing hyperbranched ether-ketone polymer having repeating units of the formula:



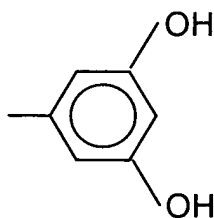
- 5 wherein n represents the degree of polymerization for the parent hyperbranched polymer, x represents the degree of endgroup functionalization, x has a value of 0.05 to 1.0, and G is selected from the group consisting of



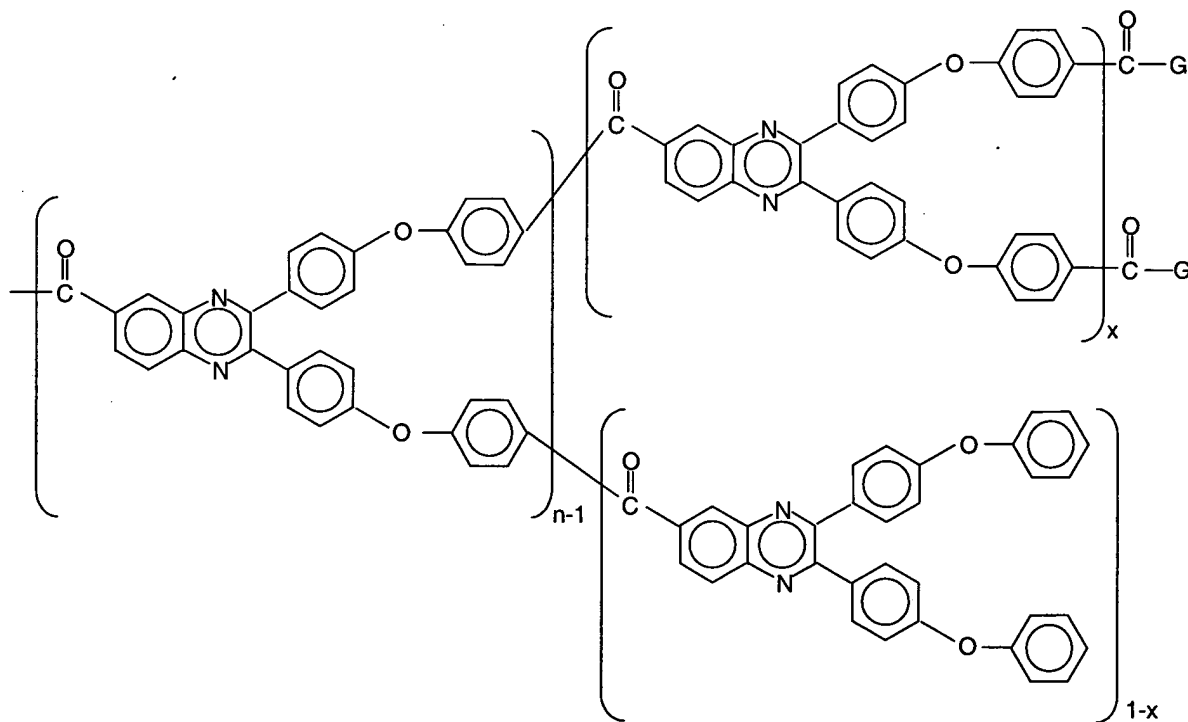


and C_qH_{2q+1} , wherein q has a value of 1 to 15.

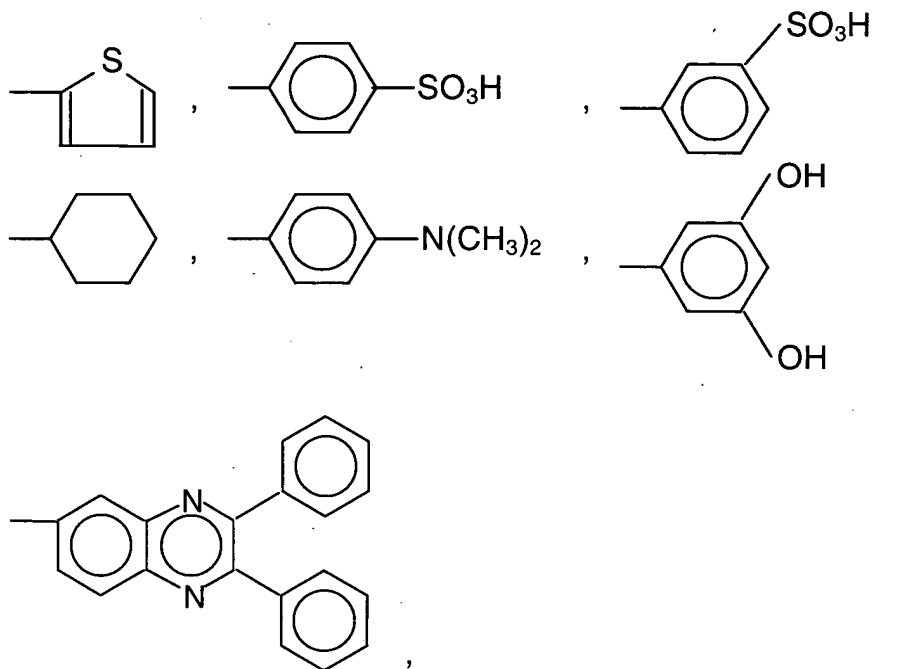
2. The polymer of claim 1 wherein said endgroup G is



5 3. A method for the polymerization of an end-capped quinoxaline-containing hyperbranched ether-ketone polymer having repeating units of the formula:



wherein n represents the degree of polymerization for the parent hyperbranched polymer, x represents the degree of endgroup functionalization and has a value of 0.05 to 1.0, and G is selected from the group consisting of



5

and C_qH_{2q+1}, wherein q has a value of 1 to 15,

which comprises heating 2,3-bis(4-phenoxyphenyl)-6-quinoxaline-carboxylic acid and an end-capping agent G-COOH, in a polymerization medium consisting of polyphosphoric acid with 83% P₂O₅ content with 25 weight percent additional P₂O₅

10 relative to said polyphosphoric acid to a temperature of about 130°C for about 24 hours and recovering the resulting polymer.

4. The method of claim 1 wherein said endgroup G is

